IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: **HOLLAND ET AL.**	)	
Serial No. **10/619,327**	)	Examiner: M. Smith
Filing Date: **July 14, 2003**	)	
Confirmation No. **6666**	)	Art Unit: 2419
For: **QUERY-BASED CALL ROUTING MECHANISM FOR MULTINODE COOPERATIVE TELECOMMUNICATION NETWORK**	)	Attorney Docket No. **72191**

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Responsive to the Final Office Action mailed May 21, 2009, and in connection with the Notice of Appeal filed concurrently herewith, please consider the remarks set out below.

The Examiner maintains the rejection of claims 1-3, 5-6, 8 and 9 as obvious over U.S. Patent No. 6,647,264 to Sasamoto in view of U.S. Patent No. 6,741,696 to Moriyama. The Examiner also objects to the claims because of an alleged double negative in the added limitations.

Applicants contend there is no double negative because the recitation (b) is clear. At the second node to which the call device is coupled, a reply message is transmitted to the first node indicating that the second node is coupled to the called device such that other nodes not having a called device as a queried target coupled thereto ignore the query message. As a result, these other nodes do not transmit a reply message. This indicates that the respective node (there

could be one, two or more nodes) not replying does not have the queried target for location or routing.

The Examiner applies Sasamoto and argues that FIG. 6 shows how routers, which do not have a mobile device, would not send a reply message to a gateway (first node) by bypassing steps 607 through 609, after step 605. The Examiner views the routers that do not reply to the search request as ignoring the message.

It should be understood that Sasamoto is specifically directed to locating a mobile communications device. FIG. 6 explains that the router receives a signal and first searches through a routing table to determine where the device is located. This routing table is considered to be accurate by the system of Sasamoto. If the routing table stored the device location, then the routing table is updated and if not, then the paging signal is broadcast to the mobile device if the device is not originally found in the routing table. If the reply occurs from the mobile device, the routing table is updated and if not, then the sequence stops. FIG. 6 is a high-level diagram and should be read in conjunction with other figures as explained below.

Contrary to the system and method in Sasamoto, the technical purpose of the claimed network and method as presented in the last Amendment is to overcome the drawbacks in a communication system (a cooperative telephony system, e.g., a private branch exchange), in which unified dialing plans (such as the Sasamoto routing table) have resource node memberships that change. Even if there is a dialing plan such as in Sasamoto, changes in the dialing plan may lead to out-of-date routing information resulting in misrouted calls, which leads to user frustration while the information is being updated. Number portability is another problem and not handled such as with systems as in Sasamoto. Also, multiple copies of routing information create a greater chance for errors.

The claimed network and method is an improvement over such systems as found in Sasamoto and does not follow the process as in Sasamoto in which routing tables are checked. Instead a new and improved call routing methodology is set forth that initially determines whether the called party is commonly located with the calling party, such as within the same

private branch exchange. If not, then the calling party node broadcasts a query message to all other nodes in the network to locate the called party. Only the node having local knowledge of the called extension will reply to the query message. Once the node sourcing the query message has received this reply message, it will place a call to the node servicing the called extension.

In the previous Amendment, each independent claim had been amended to overcome the informality concerning the recitation that other nodes are not broadcasting other signals or messages for location or routing. As noted in paragraphs 15 and 16 of the instant application, if a node does not have the requested extension, the message is ignored. For example, each of nodes B and C in the example shown in FIG. 2 of the instant application will ignore the message. If a node is connected to the requested extension, then that node replies to the requesting node that it has the queried target. Thus, as now claimed, at a second node to which the called device is coupled, a reply message is transmitted to the first node indicating that the second node is coupled to the called device such that other nodes not having the called device as a queried target coupled thereto ignore the queried message and do not transmit a reply message indicative that the respective node not replying does not have the queried target for location or routing.

Applicants emphasize that FIG. 6 in Sasamoto cannot be read separate from FIGS. 7A-7C and FIGS. 5A and 5B, which are flowcharts of the operation of a mobile gateway shown in FIG. 3 according to the first or preferred embodiment in Sasamoto. FIG. 6 is a flowchart of the operation of the mobile router that works in conjunction with the mobile gateway method shown in FIGS. 5A and 5B. The sequence diagrams for these various operational phases of the mobile router and mobile gateway are explained in the sequence diagrams of FIGS. 7A, 7B, 7C, 7D and 7E. Thus, to understand the cited FIG. 6 of Sasamoto used by the Examiner, it must be read in combination with FIGS. 7A-7E and 5A and 5B.

The Examiner concludes that steps 604 and 605 can be deleted or bypassed from the flowchart of FIG. 6, showing the operation of the mobile router. Indeed, it is clear that the technical purpose of Sasamoto is to reduce the delay involved in locating a destination mobile

data terminal when the data terminal is moving at high speeds and it is necessary to perform fast handover operations. This is accomplished in the system of Sasamoto by ensuring that other nodes broadcast the paging signals S2 and define that the requested mobile station is not within their location areas. This constant transmission of paging signals by all nodes in Sasamoto acts similar to a "redundancy" because it is directed to the tracking of fast moving data terminals and performing fast handovers. This function is clear when FIGS. 5A through 7E are read in conjunction with each other, as they should be, and not independently as the Examiner is doing.

Sasamoto particularly discloses in FIG. 7C as a sequence diagram that the other nodes as routed must broadcast paging signals S2 to find that the requested mobile station is not within their location areas. This is defined in column 6 starting at line 53 and continuing through column 7 at line 5 as was also referred to by the Examiner and also as indicated:

> "In FIG. 7C, a sequence diagram of incoming calls to the mobile station 130 according to the first embodiment is illustrated. In response to a first packet P1 from the data network 115, the gateway 114 sends search request messages S1 to the routers 111, 112 and 113. Since the location data of the mobile station 130 is stored only in the router 112, the latter responds with a reply message R, while the other routers broadcast paging signals S2 only to find that the requested mobile station is not within their location areas. Gateway 114 responds to the reply message R from the router 112 by sending the packet P1 to the router 112 and storing the routing data (DA, SA, RA) of the packet P1 in its routing table. Router 112 transmits the packet P1 to the mobile station 130 via the base station 131. When a second packet P2 arrives, the gateway 114 forwards it simply to the router 112 by using the corresponding data stored in its routing table and the router 112 relays the packet P2 to the mobile station. Subsequent packets destined for the mobile station 130 will be transmitted in the same manner as the packet P2."

The broadcast messages from each node are used by Sasamoto for storing the routing data such as at each node or router.

Moriyama is directed to the private branch exchange (PBX) as an automatic call distributing (ACD) system and there is no dynamic registration or assignment of individual stations within their network's automatic call distribution stations as a PBX.

Moriyama is directed to increasing efficiency of the automatic call distributing system that can be extended in scale. Moriyama distributes and controls incoming calls from a public line network to extension lines with extension groups using an Automatic Call Distribution Processor (ACDP). It uses database settings with different PBX's such as shown in FIGS. 3 and 4. Moriyama is similar to Sasamoto by querying a database of routing table information instead of the claimed network and method in which the system and method initially determine whether the called party is commonly located with the calling party that is within the same private branch exchange, and if not, it will broadcast the query message.

Accordingly, Applicants contend that one skilled in the art would not be motivated to use Sasamoto and Moriyama let alone combine them to form the claimed network and method as now claimed.

It is submitted that all claims are patentable over the cited prior art and the differences between the claimed network and method and Sasamoto and Moriyama are readily apparent and the claims as presented in the last Amendment are novel and unobvious over Sasamoto and Moriyama either singularly or in combination.

Respectfully submitted,

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